IN THE UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF OKLAHOMA

(1) BABY STOKES, by and through Alexis Stokes and Taylor Stokes, his guardians and next friends;	)	
(2) ALEXIS STOKES, individually, and	)	
(3) TAYLOR STOKES, individually,	)	
	)	
Plaintiffs,	)	
vs.	)	**Case No: CIV-17-186-JHP**
	)	
(1) UNITED STATES OF AMERICA ex rel. The Indian Health Service & Chickasaw Nation Medical Center, An Agency of the Chickasaw Nation,	)	
	)	
Defendant.	)	

SUPPLEMENT TO:

PLAINTIFFS' PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

Note: At the conclusion of the evidence and closing arguments, the Court asked Counsel to supplement their respective earlier Proposed Findings of Fact and Conclusions of Law (Docket 163). The following is Plaintiffs' supplemental proposed Findings of Fact and Conclusions of Law.

I. CAUSAL BREACHES IN THE STANDARD OF CARE

A) Admitted Causal Breaches in the Standard of Care Contained in Defendant's Response to Plaintiffs' First Request for Admissions. See Plaintiffs' Exhibit 248, Requests for Admissions # 7, # 9 & # 10.

1. In response to Plaintiffs' First Request for Admissions (RFA), Defendant admitted that the bedside nurse should have turned off the Pitocin and called the provider sometime between midnight and 01:00 AM on Monday morning, as testified to in depositions by Nurse JeniLee Skidmore and CNM Ashley Curtis, which testimony was incorporated into Admission # 7. Defendant admitted the causal relationship between that breach in the standard of care and the birth

asphyxia[1], suffered by Baby Stokes in response to RFA # 9. Included within that admission are the following factual admissions:

a. At that time (midnight to 01:00AM) Baby Stokes was still "well-oxygenated" and he would have continued to "remain well-oxygenated"; and
b. Had CNM Curtis been called, she would have called Dr. Frow in order to keep the fetal strip from deteriorating to a Category III fetal strip.

2. Defendant admitted that a consequence of the failure to properly manage the use of Pitocin during labor and delivery is brain damage to the baby. Defendant went further and admitted that the cause of the brain damage (Cerebral Palsy) to Baby Stokes was the five or six hours of excessive uterine activity. In response to RFA # 10, the following facts were established as "true and correct" by the Defendant's admission found in Plaintiffs' Exhibit 248:

a. That at 10:20 PM (22:20) Monday night (over four hours before birth), Nurse Daniel turned the Pitocin up from 10 to 14 milliunits per minute and that action was a "substantial deviation from the national standard of care";
b. And again, shortly after 11:00 PM, Nurse Daniel turned the Pitocin up from 14 to 18 mu/min and that was a breach of the standard of care that was "potentially serious for the baby";
c. The "primary" reason the nurse is supposed to have (at 01:30 AM) turned the Pitocin down or off and to have given Terbutaline and to have called the providers was "to avoid specifically the risk of metabolic acidosis and possible brain injury";
d. "…The consequences of significant metabolic acidosis at birth include brain damage to the baby";
e. The purpose of the rules for managing Pitocin are "… to prevent the subsequent development of metabolic acidosis and potential brain damage";
f. According to Dr. Frow, at that time (01:30AM) Baby Stokes was still "well-oxygenated" and he would have continued to "remain well-oxygenated" had Dr. Frow been called;

[1] "If sufficiently prolonged, asphyxia (disruption of exchange of oxygen and carbon dioxide between the fetal and maternal circulation) can lead to cerebral hypoxia-ischemia (as a result of severe hypoxemia and reduced cerebral blood flow from reduced cardiac function), which can overwhelm the fetus's compensatory mechanism and cause neonatal encephalopathy and cerebral palsy, especially spastic or dyskinetic quadriplegia." Task Force on Neonatal Encephalopathy, Neonatal Encephalopathy and Neurologic Outcome p. 2 (2d ed. 2014). Note, the Co-Chair of the Task Force was Plaintiffs' expert, Dr. Gary Hankins.

g. And in either event, if the baby was resuscitated in utero around 01:30, or a C-section was performed, Dr. Frow would have: ". . . expected to have had a baby born that was reasonably well oxygenated without the problems this child had"; and
h. In the "clinical setting" of Baby Stokes, there is no other identifiable possible reason for the injury to Baby Stokes other than "fetal hypoxia and metabolic acidosis as a result of five or six hours of ongoing uterine tachysystole."

3. Defendant is not allowed to take issue with, or attempt to dispute, any of these admissions. That is one of the reasons for sending requests for admissions to an opposing party. These admissions are sufficient to establish the classic elements of any medical malpractice case: A) Material breach of the standard of care; and, B) An injury to the plaintiff caused by the material breach in the standard of care.

B) Causal Breach in the Standard of Care at 01:30 AM, May 17, 2016, for Which There Is No Dispute of Fact by Defendant.

4. All of Plaintiffs' Experts, and the treating CNMC OBGYN, Dr. Frow, and Defendant's Director of Medicine, Dr. Richard McClain, and the various hospital nurses and nurse midwifes, agree that the Electronic Fetal Heart Monitor (EFM or "fetal strip") documents that Baby Stokes entered labor and delivery as a healthy and well oxygenated baby.

5. Defendant, through testimony by its representative, Dr. Richard McClain, and through Responses To Requests for Admissions, submitted by Plaintiffs (above) and made a part of the record at trial, agreed with each of the following:

a. At or around 01:16 to 1:19 AM on the morning of May 17 (birth was over two hours later at 03:43) the fetal strip of Baby Stokes shows a fetal heart rate deceleration below 90 beats per minute, which lasted for more than one minute;
b. The Doctors' Orders (Plaintiffs' Exhibits 1 & 2) clearly required nurse Tamara Daniel to do each of the following at that time:
    i. Stop the Pitocin;

ii. Perform a variety of Intra Uterine Resuscitation Measures (IURMs) [2] and, specifically, to notify the provider Ashley Curtis, the on duty Certified Nurse Midwife asleep in the hospital. Ashley Curtis testified that if she had been called, she would have then called Dr. Frow, who was less than 15 minutes away from the CNMC hospital, and readily available; and

iii. Administer the drug Terbutaline. Typically, Terbutaline will rapidly relax the uterine muscles and cause the ongoing excessive uterine activity to stop or substantially subside.

6. Defendant agreed that Tamara Daniel took none of the actions required by the doctor's orders when Baby Stokes' heart rate dropped below 90 BPM for a period of one minute or longer. Defendant agreed that Nurse Daniel's failures to take such actions was a breach of the standard of care. A number of witnesses, including Plaintiffs' Maternal-Fetal Medicine/OB-GYN expert, Dr. Gary Hankins, and Certified Nurse Midwife (CNM) Barbara Hughes, Dr. Richard McClain, OBGYN and the Director of Medicine at the CNMC, nurse midwife Ashley Curtis, and bedside nurse Jenilee Skidmore, testified that the breach in the SOC, described in the previous paragraph was substantial and material. McClain, Curtis, and Skidmore are all still currently employed by the Defendant CNMC.

7. The causal relationship between this breach in the SOC and Baby Stokes' brain damage is clear. The testimony of the attending OBGYN, Dr. David Frank Frow, as to what he would have done had he been timely called ***is not disputed by any other witness.*** That testimony, alone, establishes a causal link between this breach in the SOC and the ultimate perinatal asphyxiation, evidenced by the metabolic acidosis in the blood chemistry at birth, and hypoxic ischemic encephalopathy with which Baby Stokes was born and which is copiously documented as

[2] IURMs consist of repositioning the mother, providing oxygen, giving an intravenous bolus of fluids (lactated ringers), terming off or reducing the IV infusion of the uterine stimulant drug Pitocin.

his diagnosis in multiple early entries in his medical records at OU Children's Hospital. That testimony of Dr. Frow is summarized as follows:

a. If called at or around 01:30 AM, and had he been informed of the recent prolonged deceleration in the fetal heart rate that occurred around 01:16 AM, he would have instructed the bedside nurse as follows:
   i) Turn off Pitocin;
   ii) Perform the IURMs;
   iii) Give Terbutaline;
   iv) Make the operating room ready for a possible C-Section (Cesarean Section); and
   v) Call the Pediatrician (Dr. Balogun) and have her available in the event a resuscitation may be required;

b. Dr. Frow stated that he would have arrived at the hospital in 10 to 15 minutes;

c. Dr. Frow stated that he would have expected the cessation of the Pitocin and the use of the Terbutaline to have caused the contractions to cease or to have been greatly reduced in frequency and intensity; and

d. Dr. Frow then stated that it would have been his expectation that the subsequent course of the labor and delivery for Alexis Stokes would have resulted in one of two outcomes:
   i) Alexis Stokes' fetus would have been resuscitated "in utero" and his fetal heart rate pattern would have returned to normal and, thereafter, Alexis Stokes would have delivered a healthy, well oxygenated baby, vaginally; or,
   ii) If the fetus did not quickly recover, that Dr. Frow would have performed a prompt C-Section; and
   iii) That in either i) or ii) above, Dr. Frow would have expected to have delivered a healthy, well oxygenated baby to the parents.

8. The Court notes that it is highly unusual for a treating physician to testify, without any reservation or qualification, that the significant breaches in the standard of care for Alexis Stokes and Baby Stokes, directly caused the specific type of catastrophic injury suffered by Baby

Stokes. No witness for the Plaintiffs or the Defendant has contradicted the portion of Dr. Frow's testimony relating to the events occurring around 01:30 AM on Tuesday morning.

9. No witness has suggested any alternative outcome to the scenario and time line beginning at 01:30 AM, for the care and early delivery that has been described by Dr. Frow and which includes the birth of a healthy baby.

10. Thus, the Court finds that the breach of duty described above, is a direct cause of the neonatal birth asphyxia and the associated diagnosis of Hypoxic Ischemic Encephalopathy (HIE) suffered by Baby Stokes.

11. At the conclusion of closing arguments, the Court inquired of defense counsel about the reasons for adjusting the Pitocin. In response, defense counsel admitted that Pitocin can cause hypoxia during labor and delivery.

12. The "encephalopathy" that is part of the diagnosis of "Hypoxic Ischemic Encephalopathy" is a medically well understood and undisputed cause of loss of brain motor control and function. The Court finds that the Pitocin induced hypoxia resulted in Baby Stokes' HIE and was proximately caused by the failure of Tamara Daniel to turn off the Pitocin and notify Ashley Curtis at or around 01:30 AM on Tuesday May 17. The Court further finds that the failure of Nurse Daniel to follow her written doctors' orders, and to turn off the Pitocin at 01:30 AM (when Baby Stokes was then still "well oxygenated") resulted in the subsequent hours long, progressive, fetal hypoxia, which resulted in the birth asphyxia described by neonatologist Dr. Vickie Bailey at OU Children's Hospital. That diagnosis was based on her having been informed of Baby Stokes' blood chemistry testing (severe metabolic acidosis) which was conducted shortly after birth. That metabolic acidosis is the undisputed evidence that the asphyxia had been ongoing before and after birth. The birth asphyxia described by Dr. Vickie Bailey is the biological

mechanism that ultimately caused Baby Stokes' loss of brain motor function. That loss of brain motor function is more commonly known as Cerebral Palsy (CP) and Baby Stokes' CP classically includes his undisputed spastic quadriparesis (near or total paralysis of both of his legs and arms).

C) Multiple Additional Breaches in the Standard of Care.

13. The testimony of Dr. Hankins (OBGYN), CNM Barbara Hughes, Dr. Ward (Neonatologist, Pediatrician, & Pharmacologist) as well as the testimony of the CNMC employees CNM Ashley Curtis, Dr. Frow, Dr. Richard McClain, and others, establish that there are three aspects of the uterine contractions that are directly related to the ability of the mother's uterus to provide adequate oxygen and blood to the fetus. Those three aspects of the uterine contractions are:

a) The frequency of the contractions (how many within a given length of time);
b) The length of time between successive contractions, also known as the resting interval; and
c) The uterine pressure (measured in millimeters of Mercury - - mmHg) during the resting interval.

Dr. Hankins testified that the third item, the resting pressure between successive contractions, was of more concern than the frequency of the contractions, and explained why:

> (By Dr. Hankins) A. "And the frequency doesn't bother me as much as the baseline pressure concerns me.
> Q. Why is the baseline pressure important?
> A. Because it can adversely affect intervillous blood flow at the level of the placenta.

Trial Tr. Page 755. L 10. The frequency of contractions is often defined by the doctors (in the medical literature) as "tachysystole" if the frequency is more than 5 contractions in a ten-minute period (averaged over a 30-minute period). However, as CNM Barbara Hughes explained, nurses and nurse midwives use a different definition for "tachysys-

tole." They define excessive uterine contraction activity as "Tachysystole" when any single one of the standard of care limits for any of the three aspects of the uterine contractions (frequency, length of the interval between contractions, or the resting pressure) is violated. (See Plaintiffs' Exhibit 60.)

14. Alexis Stokes' uterine contractions were continuously recorded by a pressure sensor (Intra Uterine Pressure Catheter, or IUPC) that was first placed into Alexis Stokes' uterus around 08:00 AM on Monday morning, May 16. The uterine contractions are continuously "plotted" on the bottom portion of the EFM "strip". They show the pattern of uterine contractions as evidenced by a pattern of rising and falling uterine pressures. The length of the interval between successive contractions (resting interval) and the pressure during the resting interval are significant as that is the period of time during which blood can flow through the relaxed uterus and to the placenta in order to provide for the exchange of oxygen and carbon dioxide with the blood of the fetus.

15. The CNMC doctors' orders (Plaintiffs' Exhibit 1) clearly define how the three aspects of the uterine contractions are to be managed by the nurse and nurse midwife with respect to the use of the uterine stimulant drug, Pitocin. If the resting interval is less than 60 seconds, or the pressure during the resting interval is higher than 30 mmHg, or there are more than 5 contractions occurring, for 10 minutes, the nurse is required to turn down the infusion of Pitocin. Nurse Daniel did not comply with those orders in numerous instances. We know of her failures to comply because the CNMC has a computer system used for labor and delivery that records certain facts and measurements about the unborn baby and his mother during labor at 15-minute intervals. That system is a Phillips IntelliSpace Perinatal (PISP) system. Dr. Richard McClain

stated that he "would not quibble" with the fact that at each and every 15 minute reporting interval by the PISP, from 08:30 PM on, Monday, May 16 and for some six and one-half hours thereafter, when Dr. Frow arrived at bedside around 03:17 AM Tuesday morning, the bedside nurse, Tamara Daniel, failed to comply with the doctor's orders that required her to turn down the Pitocin. Trial Trans., Page 550. During that time, the PISP system sequentially reported some twenty-six discrete, sequential blocks of data from the uterine contractions into the nurses' notes (Plaintiffs' Exhibit 5). The bedside nurse, RN Tamara Daniel, directly violated the standard of care, by failing to comply with her doctor's orders [3], some 26 consecutive times from 08:30 PM to 03:15 AM.

16. Tamara Daniel's six-hour long series of breaches in the standard of care centered on her failure to properly manage the intra-venous infusion rate of the "High Risk" medication known as Oxytocin or, more commonly, Pitocin. Plaintiffs' expert, CNM Barbara Hughes stated:

> "A. Based on the medical literature and on my experience, permitting the ongoing tachysystole and increased uterine resting tone to continue for such an extended length of time was most likely to end up resulting in serious harm to Baby Stokes.
>
> Q. And if they were properly trained, is there any way on this earth that the bedside nurses would not have understood and appreciated that?
>
> A. I can't imagine that a professional as a registered nurse or certified nurse midwife would have continued violating the standard of care and the doctor's orders for the length of time that occurred for Mrs. Stokes' care."

Trial Trans., Page 658, L2. This testimony by, a competent certified nurse midwife, specifically testifying within the scope of her professional competency, was never disputed by any witness. Therefore, it is not only clear and convincing, it must be taken as true. This undisputed testimony by CNM Hughes, alone, is sufficient to meet the requirements of 23 O.S. § 23-61.2 to lift

[3] CNMC OBGYN Dr. Nwankwo testified that if a nurse failed to comply with the doctor's orders without first seeking the approval of the doctor, that action or inaction by the nurse was a violation of the national standard of care.

the legislative "cap" on non-economic damages as provided for in § 61.2 C and 61.2 C 4, relating to a "reckless disregard" for another's rights, which is further defined in §61.2 H 7 as follows:

> "Reckless disregard of another's rights" . . . shall mean that the defendant was either aware, or did not care, that there was a substantial and unnecessary risk that his, her or its conduct would cause serious injury to others. In order for the conduct to be in reckless disregard of another's rights, it must have been unreasonable under the circumstances and there must have been a high probability that the conduct would cause serious harm to another person.

17. The Director of Medicine at the CNMC, Dr. Richard McClain, testified on the fourth day of trial. He has been the chief medical officer at the CNMC for a number of years and he is an OBGYN. At the time of Baby Stokes' birth, he was also the head of Obstetrics and Pediatrics. During his testimony he stated that he had not bothered to read the deposition of the bedside nurse, Tamara Daniel, whose multiple breaches in the standard of care was described in paragraph 14 above, by nurse midwife Hughes. His explanation for not having read her deposition was that it was a "long deposition". See Trial Trans., pp. 548:8-549:2 The trial started about 11 months after Nurse Daniel's deposition was taken. The Court finds that Dr. McClain's indifference to the quality of care that was provided to Alexis Stokes, involving the "High Risk" uterine stimulant drug Pitocin, is another manifestation of the reckless disregard for breaches in the standard of care that involve a high risk of serious injury to the patients that existed at the CNMC.

18. There are further specific examples of breaches in the standard of care involving substantial and unnecessary risk of serious harm discussed later in this opinion. Those include the failure to timely call a pediatrician and to timely accomplish an effective resuscitation of Baby Stokes, as well as the delay caused by the unethical cancelation of the emergency ambulance transportation enroute from Oklahoma City to transport Baby Stokes to OU Children's Hospital without first having consulted his parents.

D) Excessive Uterine Activity Caused Baby Stokes to be Asphyxiated and to Suffer Brain Damage.

19. The only neonatologist who testified at trial was Plaintiffs' expert, Dr. Robert Ward[4]. Dr. Ward testified that during his career, he has resuscitated over one thousand babies.

20. Dr. Ward explained in some detail the causal mechanism by which the elevated dosing and over-dosing of Pitocin causes excessive uterine contractions. He also explained how and why the excessive uterine contraction activity causes a temporary impairment in the supply of blood to the placenta in the mother's uterus and, therefore, the supply of oxygen to the baby's body and, most critically, to the baby's brain.

21. Dr. Ward explained that the fetus can tolerate excessive uterine contraction activity for various amounts of time, depending on how strong, how frequent they occur, and whether or not the pressure between each of those successive contractions is sufficiently low in pressure so that the blood flow can resume through the uterine artery and into the placenta.

22. When the uterine contractions occur too frequently, and the resting interval is too short (< 60 seconds) and the pressure during the resting interval is too high, the baby is progressively suffocated.

23. Further, Dr. Ward explained that when excessive uterine activity continues for extended periods of time, it causes the baby's circulation system to change from "aerobic" metabolism to "anaerobic" metabolism in order for the baby to continue to provide sufficient energy to keep its

[4] Dr. Ward is unusually well qualified for this particular case. He is trained in three different specialties, each of which is particularly relevant to the case before this Court. In addition to being board certified in pediatrics and neonatology, he also has a sub-specialty in pharmacology, which is particularly pertinent to this case due to the central issue being the mis-use of the high risk uterine stimulant drug Oxytocin, which is also called Pitocin. Dr. Ward, before his efforts to seek to retire, was head of the department of Pediatrics at the very large children's hospital in Salt Lake City. He has more than a hundred peer reviewed publications in his field, and he has served on multiple national committees established by the NIH or the FDA, including serving on a committee for planning the course of future research for the federal government.

brain cells from dying. However, the anaerobic metabolic process causes a characteristic accumulation of acid in the baby's blood stream. That accumulation of acid can be measured at, or shortly after the baby's birth, and is characterized primarily by two blood parameters. Those are the acid/base pH of the blood and a parameter called the "base excess" (also sometimes referred to as a "base deficit"). The normal pH is around 7.1. The normal base excess is between -2 and +2. The first blood tests for Baby Stokes (Joint Exhibit 14, page 1508) reported the pH at 6.771[5] and the "base excess" to be (negative) 24. As Dr. Ward stated, Baby Stokes had "severe" acidosis. That level of metabolic acidosis is incompatible with life for more than a couple of hours. The record shows his blood was first sampled and tested at about 40 minutes after birth. Thus, Baby Stokes could not have been severely acidotic for more than an hour or one hour and 20 minutes before birth, or he would not have survived.

E) Breach in the Standard of Care Relating to the Resuscitation at the Time of Birth

24. Because Baby Stokes had endured "progressive suffocation" by excessive uterine contraction activity prior to birth, it was critical that Baby Stokes be timely and properly resuscitated at birth. Each of the nurses present at birth was trained in the standard NRP (Neonatal Resuscitation Program).[6] None of them even attempted to install an intubation tube (ET) in Baby Stokes. The NRP step-by-step process and timeline for resuscitation was abjectly ignored by everyone in the labor and delivery room. Baby Stokes was born with a heart rate of only 42 BPM, and he was not breathing. He was limp and blue. Dr. Balogun was the CNMC pediatrician on call, and she arrived about 30 minutes after birth. She testified that had she been called and been present

[5] The pH scale is logarithmic. Thus, the value of 6.771 is only a fraction of what its normal value (approximately 7.1) should have been. A blood pH in a newborn that is that low is incompatible with continued life, unless promptly corrected.

at birth, she would have intubated Baby Stokes within five minutes of his birth so that he could have benefited from effective ventilation of his lungs.

25. CNMC policies and procedures expressly state that resuscitation of newborn babies will follow the NRP[7]. See Plaintiffs' Exhibit 148. None of the nurses or the doctor present at birth even attempted to intubate Baby Stokes. The NRP step by step process and timeline for resuscitation was abjectly ignored by everyone in the labor and delivery room, until approximately 17 minutes after birth. At 9 minutes after birth, someone called a "Code Blue." Unfortunately, it took an additional 9 minutes for an emergency room doctor, Steven Gearhart, to arrive from the emergency room to the labor and delivery room. To his credit, Dr. Gearhart quickly and properly assessed the situation, and according to his deposition, he intubated Baby Stokes less than one minute after he arrived in the delivery room.

26. Dr. Ward testified that the most significant cause of the failed resuscitation was the failure of the medical staff to communicate and plan for a possible resuscitation. No one at the CNMC recognized that Baby Stokes would likely require resuscitation. Dr. Ward pointed out that the mere fact that a vacuum extraction device was used for assisting the delivery of Baby Stokes should have mandated the presence of a Pediatrician and resuscitation team at his birth. That statement of the standard of care was not disputed by any witness.

27. Dr. Ward testified that had the resuscitation of Baby Stokes been properly conducted in compliance with the NRP, that the resuscitation would have "… reduced his injuries. I don't know that it would have reversed them completely, but it would have reduced them." (Ward, Trial Tr. P. 613.) That opinion by Dr. Ward is not disputed by any witness, except Dr. Radetsky

[7] The NRP is a standard protocol for newborn resuscitation that Dr. Ward explained was developed at his hospital in Utah, many years ago, and then later given to the American Academy of Pediatrics (AAP) where it is now maintained and periodically updated.

who testified for the Defense. Dr. Radetsky testified that he had never seen the NRP. Further, in spite of that lack of knowledge of the current standards for conducting a newborn resuscitation, he claimed in his Rule 26 report that the resuscitation of Baby Stokes was "skillfully performed." Clearly it was not. At trial, Dr. Radetsky retreated from that position but maintained that because the heart rate increased, there was no departure from the standard of care for resuscitation. As noted, Dr. Radetsky had never seen or reviewed the NRP, prior to his testimony and was unaware that it was the standard of care at the CNMC. Therefore, the Court finds Dr. Radetsky's testimony about the resuscitation of Baby Stokes to be unreliable and not helpful to the Court.

28. For these reasons, and unrelated to any other breach in the standard of care, the Court finds that some portion of Baby Stokes' brain damage was caused by the failure of the CNMC staff to comply with the standard of care with respect to the delayed and improperly conducted resuscitation.

F) Causal Breach in the Standard of Care With Respect to the Gross Incompetence of the Bedside Nurse, Tamara Daniel.

29. The bedside nurse caring for Alexis Stokes and Baby Stokes, during the day on Monday, May 16, was RN Jenilee Skidmore. She testified at trial. Nurse Skidmore came on duty around 07:30 AM Monday and handed off her patient, Alexis Stokes, to RN Tamara Daniel around 07:30 PM Monday.

30. Nurse Skidmore provided proper care for Alexis Stokes and Baby Stokes, well within her doctor's orders with respect to titrating the infusion rate of the high-risk medication, Pitocin. Nurse Skidmore stated that during her "hand-off" of her care of Alexis Stokes that she specifically informed RN Tamara Daniel that Alexis Stokes was unusually sensitive to Pitocin.

31. In stark contrast to the care provided by JeniLee Skidmore was the care, or lack of care, provided by RN Tamara Daniel. At the time of her deposition in October of 2017, approximately 17 months after the birth of Baby Stokes, Tamara Daniel was still an employee of the CNMC, performing duties as a labor and delivery nurse. Approximately one year later, and at the time of trial, she had another job and was living more than 100 miles from the Courthouse in Muskogee, Oklahoma. Counsel represented to the Court that Tamara Daniel could not be found to be served with a subpoena to attend trial. Therefore, the Court reviewed her video-taped deposition. That deposition revealed the following with respect to the knowledge, capabilities, and the nursing care which was not properly provided by Tamara Daniel:

a) She did not know the contents of, nor even any part of the contents of, the Doctors' Orders (or the parallel nurse midwife orders) which describe the limitations on the use of Pitocin, during the induction of labor in patients similar to Alexis Stokes;
b) She did not know that those orders required her to reduce the rate of Pitocin if the resting interval between contractions was less than 60 seconds (which it was for large portions of the last six hours before the birth of Baby Stokes);
c) She did not know that those orders required her to reduce the rate of Pitocin if the uterine resting pressure between contractions was greater than 30 mmHg (which it was for large portion of the last six hours before the birth of Baby Stokes);
d) She did not know that those orders required her to stop the Pitocin, contact the provider, and administer Terbutaline to stop the uterine contractions, if there was a single deceleration in the fetal heart rate (FHR) below 90 beats per minute that lasted longer than 60 seconds (as there was at ~ 01:16 AM Tuesday morning);
e) While Nurse Daniel claimed that she palpated Alexis Stokes' abdomen to determine if it was soft between contractions, she failed to document palpating Alexis Stokes' abdomen, even one time during her entire time on duty with Alexis Stokes[8] (Alexis Stokes testified that Tamara Daniel did not palpate her abdomen at any time.);
f) When discussing the process and purpose of palpation of the abdomen in order to assess if it was adequately relaxed between contractions, Nurse Daniel exhibited almost continuous confusion or misunderstanding about the significance of the resting uterine pressure and its relationship to the use of Pitocin.

[8] As admitted by CNMC Director of Medicine, Dr. Richard McClain, during his second round of testimony when called by the Defendant, the use of an indirect means (palpation) for measuring uterine pressure should not be used when a direct means (Intra Uterine Pressure Catheter) is available.

g) Nurse Daniel allowed the uterine resting pressure between contractions to continue for hours at a level of more than 30mmHg which is the limit at the CNMC hospital;

> The significance of this lack of knowledge was described by Dr. Hankins who pointed out that the 30 mmHg upper boundary limit for uterine pressure used at the CNMC is, itself, already much higher than the limit of 20mmHg used at the hospital where Dr. Hankins teaches and the 15-20 mmHg limit that is found in the FDA package insert for Pitocin (Plaintiffs' Exhibit 147). Both Dr. Ward and Dr. Hankins explained the biological mechanism by which allowing the uterine resting pressure between contractions to remain elevated results in a progressive suffocation and hypoxia to the fetus.

h) When asked to determine the number of seconds between successive contractions (a minimum of 60 seconds was required by her doctors' orders) she was unable to do that calculation from the data available to her at bedside and which was provided (every 15 minutes) from the PISP computer system. At one point, when she was asked to go through that calculation, she was ultimately asked to divide the total number of seconds of resting time (150 seconds) in the ten-minute window of data by the number of contractions (5) in that 10-minute window. She was unable to do that simple arithmetic in her head. When then given a pen and paper, she was unable to do that calculation "on paper" and wrote on that exhibit in her hand writing: "unsure of how to do that calculation". See Plaintiffs' Exhibit 61, which was Exhibit 59 in her deposition.

32. In summary, Registered Nurse Tamara Daniel had been working as a Labor and Delivery Nurse at the CNMC for years, and she was incompetent as a Labor and Delivery nurse. There is no excuse for the failure of the CNMC to have known of her incompetence and to have failed to take steps to re-train her or to have found another position for her that did not put patients like Alexis Stokes and her baby at unnecessary high risk of catastrophic harm, as happened in this case.

G) Causal Breach in the Standard of Care With Respect to the Sinusoidal Heart Rate Pattern in the Fetal Heart Strip around 02:00 AM.

33. The treating OBGYN, Dr. Frow, and Plaintiffs' expert Dr. Gary Hankins, both testified that the fetal strip for Baby Stokes became a "sinusoidal" fetal heart rate pattern by approximately 02:00 to 02:30 AM. A sinusoidal fetal heart rate pattern is universally recognized as an

ominous sign for the oxygen status of the fetus and requires urgent intervention by the bedside care provider. Dr. Hankins is one of the preeminent experts on the subject of obstetrics, gynecology, and maternal-fetal medicine in the world. [9] The Court finds his testimony to be credible in all respects. By contrast, Dr. Richard McClain, when later called to testify by the Defendant, testified that the fetal strip was not a sinusoidal fetal strip, but a "pseudo-sinusoidal" fetal strip. On cross-examination, Dr. McClain could not point to any place in the literature (text book on Obstetrics) that he had been citing from the witness stand that defined a pseudo-sinusoidal fetal strip, nor even any mention of a "pseudo sinusoidal" fetal heart rate pattern. Further, Dr. McClain acknowledged that Baby Stokes was entitled to the "benefit of the doubt", as to whether or not the interpretation of the fetal strip was or was not a sinusoidal fetal strip, and that therefore, in order to protect the baby that the strip should have been considered to have been a sinusoidal fetal strip, and that determination should have resulted in immediate intervention to deliver Baby Stokes, more than an hour earlier than when he was delivered. Dr. McClain has not published any articles in the peer reviewed medical literature. As noted earlier, Dr. McClain did not take the time to read the deposition of the bedside registered nurse, Tamara Daniels before coming to Court and testifying as an expert witness for the Defendant. The Court accepts the testimony of Dr. Hankins and Dr. Frow and rejects the testimony of Dr. McClain on this subject.

34. The Court finds that the failure of Tamara Daniel to recognize the ominous sinusoidal patterns developing in the fetal heart strip around 02:00 to 02:30 AM and notify the on-call provider immediately was an additional breach in the standard of care that was a direct cause of the

[9] Dr. Hankins is the head of the department of Obstetrics & Gynecology at the University of Texas Medical Branch, in Galveston, Texas. He was the co-chair of the working group that drafted both the 1st and 2nd editions of the seminal treatises on "Neonatal Encephalopathy and Neurologic Outcome." These publications were jointly sponsored by the American College of Obstetricians and Gynecologists (ACOG) and the American Academy of Pediatrics (AAP). The 2nd Edition was published in 2014, and is discussed further, below. In the past, when Dr. Hankins has testified, it has most often been on behalf of the defense. Dr. Hankins has more than 200 peer reviewed publications dealing with the subject matter before the Court.

subsequent birth asphyxia and related hypoxic ischemic encephalopathy that resulted in Baby Stokes cerebral palsy and associated spastic quadriparesis.

H) Causal Breach When No Pediatrician Was Called When Dr. McClain Admits the Fetal Strip Became a Category III fetal strip.

35. As noted earlier, the mere fact that a vacuum assisted delivery was planned, created an obligation for the Pediatrician to have been called to attend the birth. However, during his cross-examination, Dr. McClain admitted that, aside from any other consideration, the EFM strip for Baby Stokes became a Category III fetal strip around 03:15 AM.[10] He further admitted that the on-call pediatrician, Dr. Balogun, should have been called at that time. As noted elsewhere, Dr. Balogun testified that if she had been called to attend the birth of Baby Stokes, she would have intubated Baby Stokes by the end of the first 5 minutes after birth (rather than the 18 minutes that actually did elapse before the E.R. doctor (Gearhart) arrived and intubated Baby Stokes.

36. As Dr. Ward described above, had Baby Stokes been timely intubated with a properly performed resuscitation, the resuscitation would have "… reduced his injuries" and may have reversed them completely. Trial Trans. 613:14-614:4.

37. For these reasons, the admitted breach in the standard of care in failing to recognize and timely react to the Category III fetal strip at around 03:15 AM, resulted in at least some injury to Baby Stokes, and possibly his complete injury.

I) Causal Breach in the Standard of Care Relating to the Cancelation of the Emergency Ambulance Transport from Ada to OU Children's Hospital.

[10] Current standards and nomenclature for evaluating fetal heart strips divide the characterization of those strips as falling into three categories. Category I is considered a normal or reassuring fetal strip, based on several specific criteria. A Category III fetal strip is one that requires urgent intervention by the care provider and an expedited delivery. There are specific features that define a Category III strip. One of those is a strip with sinusoidal heart rate patterns. Another set of features involves evaluation of the variability of the fetal heart rate.

38. Around 04:30 AM (about 47 minutes after birth) CNMC pediatrician Dr. Balogun made contact via telephone with the neonatologist on duty at OU Children's Hospital, Dr. Vickie Bailey. Around that time, Dr. Bailey agreed to dispatch an ambulance that was equipped with neonatal intensive care equipment to Ada as soon as that ambulance returned from Enid, Oklahoma. At some time after 06:00 AM, that ambulance was enroute from OU Children's Hospital to the CNMC in Ada.

39. Dr. Bailey at OU Children's Hospital described the cooling protocol to be used for Baby Stokes. That available treatment for children with neonatal asphyxiation reduces the ultimate neurological injury. Dr. Ward testified that using that cooling protocol is the "standard of care in neonatology for hypoxic ischemic encephalopathy." Trial Trans. p. 588:7-8.

40. In a subsequent phone call between Dr. Balogun and OU Children's Hospital, Dr. Balogun canceled the ambulance transfer. At the time of cancellation, the ambulance was somewhere between Oklahoma City and Ada, headed to Ada.

41. Thereafter, a nurse, Susan Friant, who was unaware that the ambulance had been canceled by Dr. Balogun, went to the Labor and Delivery room where Alexis Stokes and Taylor Stokes were waiting and asked them to sign consent forms so Baby Stokes could be transferred to OU Children's Hospital. That was the first time (nearly three hours after the birth of their son) that either parent knew that their child was in serious danger. Learning that the parents knew nothing of the condition of their baby, Nurse Friant then went to get Dr. Balogun. Ultimately, a few minutes later, and after the parents had been taken to the nursery, Dr. Balogun first met with the parents. During that conversation, she advised the parents that the CNMC had decided "not to transport" their baby.

42. Alexis Stokes objected to that decision by CNMC. She asked for a conference call with the doctor in Oklahoma City. After a conference phone call with the neonatologist (Dr. Vickie Bailey) in Oklahoma City, the ambulance was then re-dispatched (it had arrived back in Oklahoma City, after a shift change for the drivers) to the CNMC in Ada.

43. Dr. Ward testified that the action of the CNMC in deciding to cancel the ambulance and terminate care for Baby Stokes, without consulting with his parents, was not "ethical".

44. Dr. Ater testified that the delay in obtaining the critical brain cooling procedure contributed to some degree to Baby Stokes' ultimate neurological injury.

II. DEFENDANT'S "CAUSATION" DEFENSE BASED SOLELY ON THE TESTIMONY OF DR. RADETSKY

A) Dr. Radetsky's Claim that All Possible Causes for Baby Stokes' Hypoxic Ischemic Encephalopathy (HIE) Were Not Ruled Out, and Therefore, No One Can Assert That the Cause Was Due to the Progressive Effects of Hours of Ongoing Hypoxia Caused by the Improper Use of Pitocin. [11]

45. Defendant admitted there were multiple material breaches in the standard of care, including, specifically, those involving the failure to reduce or discontinue the use of Pitocin and the failure to call the medical providers to the bedside at 01:30 AM, and the failure at ~ 03:15 to call the pediatrician to be available for a resuscitation.

46. Defendant attempts to avoid an adverse finding of liability by three different lines of argument, each one supported only by Dr. Radetsky. Dr. Radetsky was the only "causation" witness called by the Defendant.

47. As part of his testimony, Dr. Radetsky asserts that there may be causes of Baby Stokes' Neonatal Encephalopathy, other than the six or more hours of progressively more severe

[11] HIE is currently regarded as a subset of neonatal encephalopathy (NE), although the terminology has often been confused in the past.

fetal hypoxia as a result of the Pitocin induced excessive uterine activity. He then follows up that observation with the assertion that because all such other possible causes of brain injury to Baby Stokes were not investigated and ruled out, no person could rationally assert that there was any specific cause of his brain injury. Notably, Dr. Radetsky never offered his opinion as to what did cause Baby Stokes neonatal encephalopathy.

48. Dr. Radetsky's testimony is, to a considerable degree, contrary to the facts that the Defendant has already admitted in response to the Plaintiffs' Requests for Admissions, discussed earlier. To that extent, the Court is obligated to disregard Dr. Radetsky's testimony. The admissions by Defendant include that, in the clinical setting of this case, there was no other cause for the injury to Baby Stokes that he (Dr. Frow) could identify other than the "…five or six hours of ongoing uterine tachysystole."

49. All of the medical records, concerning Baby Stokes, consistently record the diagnosis, beginning at the time of birth as, variously, "asphyxia", "HIE", "Hypoxic Ischemic Encephalopathy", "Cerebral Palsy", "and Spastic Quadriplegia". Each of these descriptions consistently describe the diagnosis and the resulting brain injury of Baby Stokes. Moreover, as early as three hours after birth, the treating neonatologist at OU Children's Hospital, who had only received the verbal reports of the condition of the baby and the laboratory reports relating to his fetal acidosis, made the diagnosis of "asphyxia". See Joint Exhibit 12, transcript of the telephone conversation between CNMC Pediatrician, Dr. Balogun, and OU Children's Hospital Neonatologist, Dr. Vickie Bailey, beginning at 06:54 AM, Tuesday, May 17 (day of birth):

> Page 28, beginning at Line 10:
> DR. BAILEY: Because our concern is not bleeding. You know, our concern is not bleeding in the brain. Our concern is the asphyxia that has occurred.
> DR. BALOGUN: The what?
> DR. BAILEY: The concern is not whether or not there's bleeding in the brain.
> DR. BALOGUN: Mm-hmm.

> DR. BAILEY: You know, our concern is the effect of the lack of oxygen to the brain.
> DR. BALOGUN: Right. (Emphasis added.)

50. No witness has identified any subsequent diagnosis or finding anywhere in the medical records that in any way contradicts the early and correct diagnosis of "asphyxia" due to the "effect of the lack of oxygen to the brain" that was made by Dr. Vickie Bailey at about 3 hours after birth. That diagnosis and the cause ("lack of oxygen to the brain") by the treating neonatologist, Dr. Bailey, is totally supported by the testimony of Dr. Ward, Dr. Hankins and Dr. Frow. If Dr. Radetsky's opinion is correct, then it means that dozens of doctors who have seen and treated Baby Stokes are wrong in their working diagnosis of his injury. The Court declines to accept that conclusion. Therefore, the Court rejects the efforts by Dr. Radetsky to speculate as to some other, unknown cause or diagnosis, for Baby Stokes' brain injury.

B) The Brain Imaging by MRI and Ultra Sound Demonstrates that Baby Stokes' Brain Was Damaged During the Perinatal Time Period.

51. Relevant to the issue of the cause of Baby Stokes' brain injury is the time at which his brain was damaged. Imaging of Baby Stokes' brain establishes that Baby Stokes brain injury most likely occurred during labor and delivery. Defense expert, Stuart Ater is a pediatric neurologist and he explained the significance of an ultrasound and an MRI of Baby Stokes' brain, both done at OU Children's Hospital. Dr. Ater explained that hypoxic brain damage to a newborn baby will usually not show up on imaging of the brain, until a couple of days after the damage has occurred. In Baby Stokes's case, an ultrasound of his brain was done at OU Children's Hospital on May 17, 2016 at 3:50 PM. See Joint Ex. 15, p. 2120. The reason for the scan was the already evident clinical presentation of Hypoxic Ischemic Encephalopathy. The findings of the Ultrasound, done at around 12 hours after birth, were normal and did not show any damage to

Baby Stokes' brain. However, an MRI of Baby Stokes' brain was done at OU Children's Hospital on May 24, 2016, approximately 7 days after his birth. That MRI clearly showed damage to Baby Stokes' brain. See Joint Ex. 15, pp. 2162-2163. According to the MRI report, it was compared to the "normal" Ultrasound done May 17. Clearly, the purpose of comparing the two scans is to determine differences in the condition of the brain at those two discrete points in time. If Baby Stokes' brain had been injured before Alexis came to labor and delivery, then it is likely that the damage would have shown on the Ultrasound, done approximately 48 hours after Alexis Stokes entered the hospital with a well-oxygenated baby in her womb. The findings of the MRI were consistent with the diagnosis of hypoxic ischemic injury, universally reported in the medical records from OU Children's Hospital.

52. Dr. Ater explained that the regions of the brain, described in the report of the MRI, include basal ganglion regions of the brain and that those regions were damaged by the hypoxia that occurred at or near the time of birth. Dr. Ater further opined that timing of the hypoxic damage to the time of birth by the MRI was reinforced by the presence of an essentially normal ultrasound of the head about 10 hours after birth and just before Baby Stokes began the 72-hour brain cooling protocol.

C) Dr. Radetsky's Claim that the Criteria, Identified in the Monograph, Neonatal Encephalopathy and Neurologic Outcome (2d Ed. 2014), **for Making a Determination that Neonatal Encephalopathy was Caused by Events During Labor and Delivery Have Not Been Satisfied**

53. Dr. Radetsky is a specialist in infectious diseases. He did not testify that he could identify any infectious disease involving Baby Stokes. Rather, he could only speculate that there may have been some infectious disease for the reason that tests were not done to rule out all possible infectious diseases. Dr. Ward testified that any infectious disease process was ruled out to a

99% certainty by the blood work findings with respect to the ratio of the immature to the total neutrophils, otherwise referred to as the "I/T" ratio. The Court finds that Dr. Radetsky's claims about other infectious disease processes as unknown, but "possible" causes is, at best, speculative. For that reason, those claims are rejected by the Court.

54. Further, Dr. Radetsky is not an obstetrician. Nor is he a gynecologist. Nor is he a neonatologist. Nor is he a practicing pediatrician. At present he consults at one hospital with respect to infectious diseases and is a medical director of a hospice, where he evaluates patients to certify that they are within six months of the end of their lives. For these reasons, it appears to the Court that Dr. Radetsky is not well qualified to be providing opinions in the areas (outside of infectious disease) in which he offers testimony. However, as this case is a bench trial, rather than a jury trial, the Court has considered his opinions, but that consideration takes into account his notable lack of specific qualifications in the areas for which he offers testimony, other than infectious diseases.

55. Even though he lacked qualifications and experience, Dr. Radetsky testified that he had evaluated the criteria for causation contained in a Monograph, published in 2014 by the Task Force on Neonatal Encephalopathy, entitled: Neonatal Encephalopathy and Neurologic Outcome. Dr. Radetsky took issue with almost every aspect of those criteria listed in the Monograph. However, during his cross-examination, he was forced to acknowledge multiple defects in his analysis. As one example, he selectively chose values for the Apgar scores at birth from different places in the medical records, but he ignored other reports of the Apgar scores in the same set of medical records, which were inconsistent with his desired testimony. Moreover, Dr. Radetsky refused to use the factual observations about Baby Stokes' vital signs and condition

that are in the medical records to verify or reconstruct the Apgar scores, apparently because doing so would conflict with his opinions. Further, in several instances, Dr. Radetsky changed his position at trial from the position he had taken in his Rule 26 report, regarding whether particular criteria had been satisfied. The Court finds Dr. Radetsky's opinions as to satisfaction of the criteria for determining whether a newborn baby's brain damage was caused by events occurring during labor and delivery are not credible.

D) Dr. Radetsky's Claim that Excessive Uterine Activity Has Not Been Shown by The Medical Literature to Be a Cause of Cerebral Palsy / Neonatal Encephalopathy.

56. At the conclusion of Defendant's closing argument, the Court inquired of Defense Counsel about the reasons for all of the testimony about adjusting the Pitocin. In response to that inquiry, Defense Counsel advised the Court that "Pitocin can cause Hypoxia" and suggested that the point was that Pitocin does not cause brain injury, not that it does not cause fetal hypoxia.

57. Dr. Radetsky testified and identified several journal articles that he asserted supported his claim that "tachysystole," during labor does not cause hypoxia and adverse neonatal outcomes.

58. The Court asked to review some of those articles. The first article that Dr. Radetsky mentioned is the only one that was cited in his Rule 26 expert report. The others are all articles that he did not mention in his report and did not present those articles in Court and display them on the overhead screen. For those reasons, it would be unfairly prejudicial for the Court to consider those additional articles. The Court did review the one article cited in his Report, that Dr. Radetsky characterized at trial as being among the two "most important", which is titled "Clini-

cal Associations with Uterine Tachysystole". As Dr. Radetsky stated, that study found no adverse outcomes as a result of deliveries in which (typically) there was about 1 hour of uterine contractions that were happening at a frequency of > 15 in 30 minutes. Figure 1 of the study reflects the lengths of time that the uterine "tachysystole" persisted. That figure reveals that less than a half of one percent of the patients studied had tachysystole that lasted 2 hours. Furthermore, the article states:

> "It should be noted that hospital policy during the study period required that oxytocin be discontinued in the presence of UT [Uterine Tachysystole]regardless of the fetal heart rate pattern and regular audits indicated good compliance." Emphasis added.

Thus, in the article relied on by Dr. Radetsky, and in stark contrast to the care Alexis Stokes received at the Defendant CNMC hospital, in the study Radetsky relied upon, every time "tachysystole" was observed, the oxytocin (Pitocin) ***was discontinued***. That fact explains why that study had < 0.5% of the patients with tachysystole lasting more than two hours. By contrast, what that study does not address is the effect of tachysystole on babies whose mothers experience excessive uterine activity for more than 6 continuous hours and for which the bedside nurse completely failed to comply with the "hospital policy" to turn off the Pitocin (Oxytocin). In addition, the study relied upon by Dr. Radetsky never mentions the other two characteristics of excessive uterine contractions (the interval between contractions and the uterine pressure during that interval.) Another way to interpret the study relied upon by Dr. Radetsky is that, if hospitals follow their procedures consistently and 'discontinue Pitocin" when tachysystole is observed, one will almost never encounter the kinds of perinatal asphyxia suffered by Baby Stokes at his birth. As noted earlier, the resting uterine pressure is, according to Dr. Hankins, more important than the frequency of the contractions (tachysystole). That aspect of the uterine contractions was never even mentioned in the article relied upon by Dr. Radetsky.

59. Defendant and Plaintiffs agreed that a Monograph, published in 2014 by the Task Force on Neonatal Encephalopathy, entitled Neonatal Encephalopathy and Neurologic Outcome, is the best tool to determine if a newborn baby's brain damage was caused by events occurring during labor and delivery. Defendant submitted the executive summary from the Monograph as literature referred to and relied upon in the trial and Plaintiffs also submitted the executive summary and chapter 1 of the Monograph. It is clear from those materials that Cerebral Palsy can be caused by events occurring, during labor and delivery and determining whether a baby's cerebral palsy was caused by events during labor and delivery, depends upon the presence or absence of various criteria listed and described in the Monograph. This is contrary to Dr. Radetsky's position at trial that a determination that Cerebral Palsy was caused by birth asphyxia cannot be made unless all other possible causes are eliminated.

60. In response to the Court's request at the close of the evidence, Plaintiffs offered a recently published Journal Article from the peer reviewed literature. [12] A finding in that article is that there is a 44.9 times (4,499%) increase in neonatal encephalopathy if the care providers allowed the fetal strip to deteriorate from a Category II to a Category III fetal strip - - which happened during the last one or two hours before the delivery of Baby Stokes. This outcome, according to Defendant's Admissions, most likely would have been prevented had Dr. Frow been called at any time from midnight to 01:30 AM when the Defendant admitted the standard of care required him to be called.

61. The Court finds an analogy may be of use. Suppose that a study showed that you could intermittently shut off the blood flow to the uterus for 2 hours without adverse effect. Would that data in any way justify a conclusion that it would be safe to intermittently continue to

[12] HA Frey, et. al., An evaluation of fetal heart rate characteristics associated with neonatal encephalopathy: a case-control study, 125 Brit. J. of Obstetrics and Gynaecology 1480 (2018).

shut off the blood flow for 6 hours and expect there to be no adverse effect? Any person who claimed that would not be considered to be credible. For all of these reasons, the Court rejects Dr. Radetsky's testimony that there is no causal relationship between excessive uterine activity and the adverse neurological outcome suffered by Baby Stokes.

62. The Court rejects the explanation (or the absence of any explanation) offered by Dr. Radetsky as to the cause of Baby Stokes brain injury and cerebral palsy. Consistent with the Admissions already made by the Defendant, the Court accepts the causal explanation as stated by Dr. Ward:

> Transcript P 586 L13
> Q. Do you hold an opinion with medical certainty as to -- number one, does Baby Stokes have cerebral palsy?
> A. Yes.
> Q. Does he have spastic quadriparesis associated with it?
> A. Yes.
> Q. Normally in these kinds of cases, doctors are giving opinions to a level of medical probability. Do you -- first -- well, simply, do you have an opinion as to whether or not Baby Stokes' cerebral palsy and spastic quadriplegia is due to hypoxic ischemic encephalopathy?
> A. Yes, I believe that that's what the cause is.
> Q. And so at what level do you possess that opinion as you sit here today?
> P 587
> A. To a level of medical certainty.
> Q. That's pretty rare in medicine, isn't it?
> A. Yes.
> Q. And do you hold that opinion that the HIE and the fetal hypoxia occurred just prior to birth?
> A. Yes, both prior to birth, and the late resuscitation contributed to it after birth.
> Q. And all of those things are held, in your mind, to a level -- to a medical level of certainty?
> A. They are.
> Q. As a person who is dually trained, or triply trained in pediatrics, neonatology and pharmacology, do you have an opinion as to whether or not the Pitocin was used properly or improperly with respect to this labor and delivery?
> A. It was used improperly.
> Q. And is the improper use of Pitocin, do you have an opinion as to the role it played in the subsequent cerebral palsy?
> A. Yes.
> Q. What is that opinion?

A. It essentially produced progressive suffocation of this baby in utero because of the compression that it produced, and the lack of time in between contractions to restore adequate blood flow to the fetus and adequate oxygen exchange.

III. LIFE EXPECTANCY

A) The Credible Evidence Establishes That Baby Stokes Is Not In a Persistent Vegetative State and Has Substantial, or Possibly Normal, Preserved Cognitive Functioning.

63. Defendant called Dr. Jerry Tomasovic, a pediatric neurologist as an expert on life expectancy. Dr. Tomasovic has testified for the United States in similar cases involving similar children, approximately 9 times in the past 10 years. Dr. Tomasovic has frequently given life expectancy estimates based on a diagnosis that the child is in a "persistent vegetative state" (PVS) and, therefore, without cognitive ability or any ability to interact with his environment or his parents. Dr. Tomasovic physically examined Baby Stokes on February 23, 2018, at the age of approximately 21 months. He physically examined Baby Stokes for less than 9 minutes. He spent less than one-hour total time with the parents and their son.

64. Based on that evaluation, Dr. Tomasovic stated that it was his opinion that Baby Stokes was in a PVS and that it was his opinion that Baby Stokes had a median life expectancy (different from an average life expectancy) of 12 to 15 additional years. He did not provide any estimate as to his average or statistical life expectancy.

65. By contrast, Dr. Shawn Smith, a physiatrist specializing in rehabilitative medicine, who practices in Oklahoma City, with earlier experience with children and a current primary clinical practice involving severely disabled adults, testified that he had examined Baby Stokes some four times over the last 18 months and that Baby Stokes was clearly responsive to his environment and to his parents and clearly able to manifest choices by signaling "no" by the slow left

and right movements of his head. Baby Stokes was further able to manifest an affirmative response ("yes") by making an audible "Ahhh" sound. Importantly, Dr. Smith testified that during his last exam of Baby Stokes (about two weeks before trial started on September 17) when Baby Stokes was in his office, that Dr. Smith was able to confirm, personally, many of the activities, skills, and abilities that Baby Stokes demonstrated in a variety of short video segments that had been provided to Dr. Tomasovic and to Defendant's other life expectancy expert, Dr. Reynolds. At various times during the trial, the Court was able to view those video segments. Dr. Smith's opinion was that Baby Stokes' life expectancy is 50-55 years.

66. Plaintiffs called Dr. Paul Kornberg as an expert witness. Dr. Kornberg is a pediatric physiatrist who works at multiple hospitals in Tampa, Florida. Dr. Kornberg has extensive experience with children similar to Baby Stokes with cerebral palsy and spastic quadriparesis. His testimony was that it was common for those children, in their early years, to be in the hospital multiple times for extended periods of time. He also testified that with good quality, available medical care, that it was his opinion that Baby Stokes would have a life expectancy of 55 years. This life expectancy is very similar to that provided by Dr. Shawn Smith of 50-55 years. Based on his review of multiple video segments, Dr. Kornberg also testified that Baby Stokes is not in a persistent vegetative state.

67. Dr. Stewart Ater testified that Baby Stokes was not in a PVS. As noted above, in connection with the description of the MRI and Ultrasound findings, Dr. Ater is a pediatric neurologist. He examined Baby Stokes in his home during a lengthy physical therapy session conducted by Baby Stokes' physical therapist, Gary Robinson. Gary Robinson also testified about his weekly physical therapy sessions with Baby Stokes, during the past two years. His testimony was consistent with that of Dr. Ater, Dr. Smith, and Dr. Kornberg.

68. Dr. Ater testified, and it is undisputed, that Baby Stokes has a normal head circumference for his age. Dr. Tomasovic initially, erroneously testified that Baby Stokes' had "microcephaly" but when confronted on cross examination, he then admitted that Baby Stokes did not have microcephaly and in fact had a normal head size. Dr. Ater testified that the MRI of Baby Stokes' brain done seven days after he was born, revealed that the portion of Baby Stoke's brain known as the hippocampi were not damaged. The damaged portions were the basal ganglion, which are associated with motor control. The rest of the brain, including the large portions that provide cognitive functioning are preserved or relatively preserved. The significance of this finding is that the hippocampi are the portion of the brain that allow a human to form and retain memories. The combination of these factors formed the basis for Dr. Ater's testimony that Baby Stokes may in fact be "cognitively" relatively normal but is simply trapped in his body with spastic quadriparesis.

69. Dr. Ater testified (as did Dr. Shawn Smith) that Baby Stokes suffered from what is called "brady kinesia," which is a neurological condition that arises from the damage to basal ganglion which interferes with his ability to make normal movements and causes his movements to be very slow. That description is consistent with what the Court observed when the Court watched the video segments of Baby Stokes. One of those segments showed Baby Stokes responding to his Mother's request to use his left leg (his left side is slightly less impaired than his right side) to activate his favorite toy "Elmo" by pressing a large button with his foot. Baby Stokes was able to activate the toy and make it "talk" to him three times in the space of one minute.

70. The Court finds that Baby Stokes is not in a persistent vegetative state.

71. Dr. Smith's testimony that he observed Baby Stokes in September of 2018 to have progressed in his motor skills and to then be able to lift his head from a prone position and to be able

to roll from side to back to side ***is not disputed by any witness***. Those motor skill characteristics are critical in the evaluation of life expectancy. Each of Defendant's life expectancy experts (Dr. Tomasovic and statistician Dr. Reynolds) assumed that Baby Stokes was in a PVS and that he did not have the ability to lift his head nor to roll. Because Dr. Tomasovic and Dr. Reynolds used the wrong criteria (PVS) when accessing the statistical databases and using that erroneous classification as the basis of their opinions for Baby Stokes' life expectancy, their life expectancy opinions are, inevitably, incorrect.

72. Plaintiffs presented the testimony of Dr. Susan Shott by videotaped trial deposition. Dr. Shott is a biostatistician. She testified that one useful source of statistical data for children like Baby Stokes is the publicly available spinal cord injury database. Because the disabilities of Baby Stokes are similar to those of a patient who suffered a traumatic injury to the spinal cord at levels C1-C4, causing quadriplegia, the survival data from that database is useful in estimating the life expectancy of Baby Stokes. Her analysis supported her opinion that with good, high quality care, Baby Stokes would have a life expectancy of 52 years. She also offered the opinion, that if there are continued improvements and advances in medical care for these patients, his life expectancy could be expected to extend into the 6th decade of life.

73. Defendant called Dr. Robert Reynolds as a statistician and epidemiologist, who testified based on the use of information from a database from California, which involved developmentally delayed children, including children with CP. He relied upon the opinion of Dr. Tomasovic that Baby Stokes was in a PVS and that he could not lift his head or roll over. Based on those assumptions, he gave an opinion that Baby Stokes had a life expectancy of 17 additional years, to the age of 19.

74. During cross-examination, Dr. Reynolds was forced to admit that there are databases for children with cerebral palsy from Western Australia and from England that, when using his own published methods to extrapolate life expectancy past the original study period, show the statistical life expectancy for Baby Stokes to be in the 43 to 60-year range. See Plaintiffs' Exhibits 208 and 212 for the graphical presentation of that data.

75. In summary, the life expectancy opinions of Defense experts Dr. Tomasovic and Dr. Reynolds are each based on the assumption that Baby Stokes is in a persistent vegetative state. Clearly that assumption is incorrect. By contrast, the Plaintiffs presented life expectancy data from five different sources. Two of those are clinical opinions (Dr. Smith and Dr. Kornberg) and three of those are statistical data. One of the statistical based opinions is from Plaintiffs' expert biostatistician Dr. Shott, relying upon the spinal cord injury data base. The other two statistical based life expectancy values are based on the cerebral palsy databases from Australia and England and the use of the Defense expert Dr. Reynold's own published methodology for estimating life expectancies using those databases. All five of those independent sources of life expectancy data support a finding of a life expectancy for Baby Stokes in the 50-55-year range.

76. Each of the Plaintiffs' life expectancy witnesses noted that life expectancy for children like Baby Stokes is dependent on the availability of high-quality medical care and on the presence of hyper-vigilant parents. The Court finds that Alexis and Taylor Stokes are exceptional parents and easily meet the definition of hyper-vigilant parents with respect to the care for their son.

77. For all of these reasons, the Court finds that Baby Stokes' life expectancy is 52 years.

IV. DAMAGES

A) Plaintiffs Have Met the Burden of 23 O.S. § 61.2 to Avoid Imposition of the Statutory "Caps" on Non-Economic Damages.

78. As discussed earlier, the six-hour-long (or more) continuous string of discrete breaches in the standard of care for managing Pitocin by Nurse Daniel clearly evidence a reckless disregard for the safety of Baby Stokes and that type of long, unrelieved string of breaches in the standard of care created a substantial and unnecessary risk that Baby Stokes would suffer serious harm. And he did. The failure to turn off the Pitocin, call CNM Curtis or Dr. Frow, at 01:30 AM is another breach that evidences a reckless disregard for the safety of Baby Stokes that also carries with that failure a substantial and unnecessary risk of serious harm. The failure to have the Pediatrician present at birth, in the face of an admitted Category III fetal strip and the planned use of the vacuum extraction device, is another example of a reckless disregard for the safety of Baby Stokes. Clearly, that breach also created an unnecessary and high risk of harm to Baby Stokes. The delay in receiving the brain preserving treatment in Oklahoma City to cool his brain, due to the unethical cancelation of the ambulance, is another example of a breach in the standard of care that also avoids the imposition of the statutory caps under Oklahoma Law.

B) Damages For Lifetime Cost of Care

79. The Life Care Plan (LCP) for Baby Stokes prepared by Nurse Sherry Latham is the only LCP before the Court. The Defendant did not prepare a LCP. Each of the 190-line item provisions for the care of Baby Stokes were medically approved as reasonable and appropriate by both Dr. Shawn Smith and Dr. Kornberg. Defendant's life care planner, Susan Riddick Grisham, agreed that Latham had done a good job in preparing the LCP. Grisham did not have any criticism of the method used by Latham or the pricing of the items in the LCP. Her criticisms of the LCP were as to whether some specific items were necessary for the care of Baby Stokes. Her

dominant criticism revolved around whether or not Baby Stokes would go to school. The brief cross examination of Nurse Latham was focused on whether or not Baby Stokes might go to school. This type of questioning from the Defendant, who claims Baby Stokes is in a persistent vegetative state, is puzzling to the Court. Alexis Stokes testified that she planned to home school her son so that issue appears to be moot.

80. For these reasons, the Court accepts the LCP of Nurse Latham. Her life care plan included a range of values depending on the low range and high range of the costs of the various items of care. Dr. James Horrell then took each of the 190-line items from the LCP and performed a present value calculation for each one of those items and for each year out to the age of 77 years. From his table, one can calculate the cost of care for any specific life expectancy that the Court finds to be supported by the evidence in this case.

81. Dr. Horrell has a table, on page 6 of his report (Plaintiffs Demonstrative Exhibit 35). In that table he has the present value of the cost of care for the mid-range of the cost of care items in the LCP for a life expectancy of 52 years. The mid-range value is the mid-point between the values, calculated using Nurse Latham's low and high values for each of the items for the 190 discrete cost of care items in her LCP.

82. The value for the 52 years of care for Baby Stokes, from Dr. Horrell's table is the sum of $43,492,477.

83. The Court finds that Dr. Horrell's use of the risk free and available investment interest rate or yield, in compliance with the requirement stated by the United States Supreme Court in *Jones & Laughlin Steel Corp. v.Pfeiffer*, 462 U.S. 523, 537 (1983), is the proper way to determine the net present value of the expenses that were described in the LCP . The method used by Defendant's economist, Dr. Clark, does not comply with the methodology that the U.S. Supreme

Court describes in *Jones & Laughlin v. Pfeiffer*. For that reason, Dr. Clark's economic evaluations are not adopted by this Court.

84. The value for the 52 years of care for Baby Stokes, from Dr. Horrell's "Overall Summary Table" in his March 5, 2018 report, page 6 of 7, is the sum of $43,492,477. The Court adopts that value as the damages awarded for the expected 52-year cost of care for Baby Stokes.

85. The Court does not include damages for the wrongful death nor for the reduced future life expectancy. Those issues remain as viable causes of action in the event Baby Stokes suffers an untimely demise.

C) Medical Expenses

86. Plaintiffs submitted evidence of medical expenses that have been charged for the care of Baby Stokes and those amounts totaled $1,178,213.61. See Plaintiffs' Exh. 140. Defendant submitted affidavits of the amounts of medical expenses that have been paid for the care of Baby Stokes from certain providers up to certain various dates. See Defendant's Exhibits 14, 15, 16, 17, 18, 19, 20, and 24. The total paid amount of medical expenses on those affidavits is $343,817.07. Baby Stokes has had significant medical care after the dates of care for which expenses were provided to the Court at trial. Plaintiffs have supplemented the record with additional medical expenses that have been paid for care of Baby Stokes occurring between June 25, 2018 and October 2018. The total paid expense, during that period is $111,647.25.[13]

D) Summary of Damages:

1) The Court awards Baby Stokes the following damages:

[13] Plaintiffs have been unable to obtain information as to the amount paid OU Children's Hospital for Baby Stokes' stay of May 19, 2018 – June 14, 2018. The total charged for such stay is $740,692.06. Additionally, Plaintiffs have been unable to obtain the amount paid to OU Children's Hospital for Baby Stokes' stay in the hospital beginning October 26, 2018 or the amount paid for an air ambulance transport to OU Children's Hospital. Prior to entry of judgment, Plaintiffs may provide an affidavit and supplement to the record.

a. Noneconomic damages: $15,500,000;

b. Economic damages: $1,515,166.

2) The Court awards Taylor and Alexis Stokes jointly the following damages:

a. Lifetime care of Baby Stokes in the future: $43,492,477;

b. Past medical expenses: $455,464.

3) The Court awards Alexis Stokes, individually the following damages:

a. Noneconomic damages: $3,500,000;

b. Economic damages for her lost wage earnings over her lifetime: $1,539,791;

c. Economic damages for her equivalent skilled nursing services: $786,240.

4) The Court awards Taylor Stokes, individually, the following damages:

a. Noneconomic damages: $3,500,000.

The total damages awarded to Plaintiffs are: $70,289,138.

V. ISSUES INVOLVING POST JUDGMENT PAYMENT OF DAMAGES

A) Periodic Payments or Use of a Reversionary Trust

87. At the conclusion of closing arguments, the Court asked Counsel to provide briefs as to the ability of the Court to Order Payments to be made as "Periodic Payments" and whether the Defendant had a mechanism by which the government could make periodic payments.

88. The Court also inquired about the possible use of some form of a reversionary trust for damages awarded for future care of Baby Stokes.

89. Plaintiffs' stated position is:

a. Recent law in the case of *Dixon v. United States,* 900 F.3d 1257 (11th Cir. 2018) indicates that the United States government cannot obligate itself to make periodic payments;

b. With respect to a possible Reversionary Trust, Plaintiffs point to the case of *Peterson v. United States*, 469 F. Supp. 2d 857 (D. Haw. 2007), which contains an extensive discussion as to why the use of a reversionary trust inherently harms the plaintiff as it means that in the event that a child lives longer than the statistical life expectancy (which ~50% of those children will) then the parents must assume all of the burden of the cost of care, but in the event the child dies early, the United States receives money that has not been spent. So, the United States bears no risk of the child outliving his award for life care expenses but benefits greatly if the child dies prematurely;

c. Plaintiff also points to authority in the 10th Circuit that suggests the Court may not require a reversionary trust unless there is either a request for the Court to do so by the parents, or there is a finding that the parents are not competent parents and, in that case,, a court appointed guardian *ad litem* might make that request. See *Hull v. United States*, 971 F.2d 1499 (10th Cir. 1992);

d. However, the Court notes that the Plaintiffs have filed an exhibit attached to the brief on this subject of periodic payments and reversionary trusts. In that brief, Plaintiffs have conditionally proposed a Reversionary Trust (Exhibit 1 to that Brief) which Plaintiffs would be willing to accept. That trust has been approved by the Probate Court of the District Court of Pontotoc County in Probate Case PG-16-46. That Trust incorporates a 14 year provision by which, during the first two years, if Baby Stokes were to suffer an untimely death, all but 1/7th (14.3%) of the unspent and unobligated trust funds would be paid by the Trustee back to the United States. Every two years, thereafter, the fraction subject to the reversion to the United States would decrease by 1/7th. Thus, at the end of 14 years, the reversionary provisions of the trust would no longer apply; and

e. Effectively, the trust arrangement proposed by the Plaintiffs approximates the Oklahoma Periodic Payments Statute, but doubles the statutory maximum 7-year period for application of periodic payments to a Tort Judgment, from 7 years to 14 years. In addition, the Tortfeasor is favored by not having to pay interest on the deferred periodic payments at the current Oklahoma Judgment rate of 6.5% per annum.

90. The Court finds the trust as proposed by the Plaintiffs in its briefing on this subject, to be a reasonable means to meet the Court's concerns and to potentially avoid a potential long series of appeals which would frustrate the purpose of the Court to provide early relief for Baby Stokes and his parents so that they may begin to restore some sense of normalcy to their lives, to the extent that may even be possible.

91. For these reasons, the Court will order that the total cost of care portion of the entire Judgment will be paid to the D.A.S. 11-18 LIFETIME CARE TRUST, Vision Bank, N.A. (Ada, Oklahoma) Trustee to be administered according to the terms of that document. Before payment by the Defendant, the Trustee or the Plaintiffs are each authorized to direct that any portion of the Judgment be paid into a Qualified Settlement Fund so that the Trustee, with the consent of the Parents, might, in their collective discretion, elect to purchase an appropriate annuity with some portion of the funds used for the lifetime cost of care, or so that the Parents may do the same with respect to any portion of the Judgment allocated directly to them or Baby Stokes.

92. If the Defendant objects to this arrangement, then the Court will order the entire Judgment paid into the registry of the Court and the Clerk will be directed to disperse the funds as described above.

B) Retention of Jurisdiction to Resolve Post Judgment Issues With Respect to Payment of the Judgment and the Management of the Trust.

93. Post Judgment, the Court retains jurisdiction of this matter to resolve any disputes with respect to the payment of the Judgment, the allocation of the payments of the judgment among the various interested parties, the Trust, the disbursement of the payments in satisfaction of the Judgment, and any subsequent issues that may arise out of, or related to, the remaining balance in the trust that may be payable to the United States in the event of the early demise of Baby Stokes.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on November 1, 2018, I electronically submitted the foregoing document to the Clerk of the Court for filing in this case. Based on the records currently on file, the Clerk of the Court will transmit a Notice of Electronic Filing to the following ECF registrants:

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s/ George W. Braly